

ABSTRACT

The present invention provides for a transistor in series with the video input of a video input device prior to the termination resistor. The transistor is utilized due to the large amount of power that would be dissipated across the termination resistor if the video input was inadvertently connected to the automotive battery voltage. For the typical automotive battery of 14 volts, approximately 2.6 watts would be dissipated over the termination resistor likely causing a failure in the video input device. An N channel MOSFET can be used as the switch to provide an extremely low series resistance compared to the 75 ohm termination resistor. This low series resistance minimizes video signal degradation which would be caused by higher impedance switches due to the voltage divider formed by the switch impedance and the 75 ohm termination resistor. An N channel MOSFET also provides fast switching speeds and can be selected to minimize parasitic capacitances such that the video signal is not degraded due to the 75 ohm source impedance.